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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,234	10/22/2001	Mitchell A. Lazar	053893-5032-01	4995

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MORGAN, LEWIS & BOCKIUS LLP
1701 MARKET STREET
PHILADELPHIA, PA 19103-2921

EXAMINER	
FALK, ANNE MARIE	

ART UNIT	PAPER NUMBER
1632	

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/986,234	LAZAR, MITCHELL A.	
	Examiner	Art Unit	
	Anne-Marie Falk, Ph.D.	1632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2003*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-81* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-81* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Notice to Comply*.

DETAILED ACTION

Claims 1-81 are pending in the instant application.

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

There are two claims numbered as Claim 25. The second instance of Claim 25 (top of page 120) has been renumbered as Claim 26.

Sequence Rules

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 C.F.R. 1.821-1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

The reply filed on October 17, 2003 is not fully responsive to the prior Office letter and Notice to Comply with the Sequence Rules because of the following omission(s) or matter(s):

The reply does not comply with the requirements set forth on the Notice to Comply with the Sequence Rules mailed 10/3/03 because Applicants have not provided the requisite statement that the content of the paper and computer readable copies of the Sequence Listing are the same, as required by 37 CFR §1.821(f).

Appropriate correction is required.

Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-3, 5, 6, 14-18, drawn to (i) an isolated nucleic acid encoding mouse resistin (SEQ ID NO: 1), or a fragment thereof, (ii) said isolated nucleic acid operably linked to a promoter/regulatory sequence, (iii) a vector comprising said nucleic acid, (iv) a recombinant cell comprising said nucleic acid or said vector, classified in class 536, subclass 23.51; class 435, subclass 320.1; and class 435, subclass 325

II. Claims 1, 2, 4, 5, 7, 14-18, drawn to (i) an isolated nucleic acid encoding human resistin (SEQ ID NO: 3), or a fragment thereof, (ii) said isolated nucleic acid operably linked to a promoter/regulatory sequence, (iii) a vector comprising said nucleic acid, (iv) a recombinant cell comprising said nucleic acid or said vector, classified in class 536, subclass 23.51; class 435, subclass 320.1; and class 435, subclass 325.

III. Claims 8-10, drawn to an isolated polypeptide comprising a mammalian resistin with at least about 30% sequence identity with an amino acid sequence of SEQ ID NO: 2 (mouse resistin), classified in class 530, subclass 399.

IV. Claims 8, 9, and 11, drawn to an isolated polypeptide comprising a mammalian resistin with at least about 30% sequence identity with an amino acid sequence of SEQ ID NO: 2 (human resistin), classified in class 530, subclass 399.

V. Claims 12 and 13, drawn to a nucleic acid encoding a fusion protein comprising (i) a tag polypeptide and (ii) a mouse resistin polypeptide or fragment thereof, classified in class 536, subclass 23.4.

VI. Claims 12 and 13, drawn to a nucleic acid encoding a fusion protein comprising (i) a tag polypeptide and (ii) a human resistin polypeptide or fragment thereof, classified in class 536, subclass 23.4.

VII. Claims 19-21, 25, 75, 77, 79, and 81, drawn to (i) an isolated nucleic acid complementary to a nucleic acid encoding mouse resistin (or a fragment thereof), said complementary nucleic acid being in an antisense orientation, (ii) the nucleic acid of (i), wherein said nucleic acid shares at least about 30% identity with a nucleic acid complementary with a nucleic acid having the sequence of mouse resistin (SEQ ID NO: 1), (iii) a recombinant cell comprisisng the antisense nucleic acid of (i), and (iv) an antidiabetic composition comprising the nucleic acid of (i) and a pharmaceutically-acceptable carrier, classified in class 536, subclass 24.5; class 435, subclass 325; and class 514, subclass 44.

VIII. Claims 19-21, 25, 75, 77, 79, and 81, drawn to (i) an isolated nucleic acid complementary to a nucleic acid encoding human resistin (or a fragment thereof), said complementary nucleic acid being in an antisense orientation, (ii) the nucleic acid of (i), wherein said nucleic acid shares at least about 30% identity with a nucleic acid complementary with a nucleic acid having the sequence of human resistin (SEQ ID NO: 3), (iii) a recombinant cell comprisisng the antisense nucleic acid of (i), and (iv) an antidiabetic composition comprising the nucleic acid of (i) and a pharmaceutically-acceptable carrier, classified in class 536, subclass 24.5; class 435, subclass 325; and class 514, subclass 44.

IX. Claims 22-24, 74, 76, 78, and 80, drawn to (i) an antibody that specifically binds mouse resistin polypeptide, or a fragment thereof, and (ii) an antidiabetic composition comprising the antibody of (i) and a pharmaceutically-acceptable carrier, classified in class 530, subclass 387.1 and class 514, subclass 2.

X. Claims 22-24, 74, 76, 78, and 80, drawn to (i) an antibody that specifically binds human resistin polypeptide, or a fragment thereof, and (ii) an antidiabetic composition comprising the antibody of (i) and a pharmaceutically-acceptable carrier, classified in class 530, subclass 387.1 and class 514, subclass 2.

XI. Claim 26, drawn to a composition comprising an isolated nucleic acid encoding mouse resistin, or a fragment thereof, and a pharmaceutically-acceptable carrier, classified in class 514, subclass 44.

XII. Claim 26, drawn to a composition comprising an isolated nucleic acid encoding human resistin, or a fragment thereof, and a pharmaceutically-acceptable carrier, classified in class 514, subclass 44.

XIII. Claims 27-32, drawn to (i) a knock-out targeting vector comprising a first nucleic acid portion comprising a nucleic acid sequence 5' of the open reading frame encoding mouse resistin and a second nucleic acid portion comprising a nucleic acid sequence 3' of the open reading frame encoding mouse resistin, (ii) a recombinant cell comprising the knockout targeting vector of (i), and (iii) a transgenic non-human mammal comprising the knockout targeting vector of (i), classified in class 435, subclass 320.1; class 435, subclass 325; and class 800, subclass 14.

XIV. Claims 27-32, drawn to (i) a knock-out targeting vector comprising a first nucleic acid portion comprising a nucleic acid sequence 5' of the open reading frame encoding human resistin and a second nucleic acid portion comprising a nucleic acid sequence 3' of the open reading frame encoding human resistin, (ii) a recombinant cell comprising the knockout targeting vector of (i), and (iii) a transgenic non-human mammal comprising the knockout targeting vector of (i), classified in class 435, subclass 320.1; class 435, subclass 325; and class 800, subclass 14.

XV. Claim 33, drawn to a transgenic non-human mammal comprising a nucleic acid encoding mouse resistin, or a fragment thereof, classified in class 800, subclass 14.

XVI. Claim 33, drawn to a transgenic non-human mammal comprising a nucleic acid encoding human resistin, or a fragment thereof, classified in class 800, subclass 14.

XVII. Claims 34, 38, 40, and 42 drawn to a method of alleviating type 2 diabetes by administering a composition comprising an antibody that specifically binds a mammalian resistin polypeptide, or a fragment thereof, classified in class 514, subclass 2.

XVIII. Claims 35, 38, 40, and 42, drawn to a method of alleviating type 2 diabetes by administering a composition comprising a mammalian resistin antisense nucleic acid, classified in class 514, subclass 44.

XIX. Claims 36, 39, 41, and 43, drawn to a method of alleviating Syndrome X by administering a composition comprising an antibody that specifically binds a mammalian resistin polypeptide, or a fragment thereof, classified in class 514, subclass 2.

XX. Claims 37, 39, 41, and 43, drawn to a method of alleviating Syndrome X by administering a composition comprising a mammalian resistin antisense nucleic acid, classified in class 514, subclass 44.

XXI. Claims 44, 46, and 48-50, drawn to compound screening assays, classified in class 424, subclass 9.1 and class 435, subclass 4.

XXII. Claim 45, drawn to a compound, unclassifiable.

XXIII. Claim 47, drawn to a compound, unclassifiable.

XXIV. Claims 51 and 52, drawn to a method of increasing glucose uptake by a cell, classified in class 514, subclass 1.

XXV. Claim 53, drawn to a method of increasing insulin-stimulated glucose uptake by a cell, classified in class 514, subclass 4.

XXVI. Claims 54 and 55, drawn to a method of diagnosing type 2 diabetes, classified in class 435, subclass 7.1.

XXVII. Claim 56, drawn to a method of diagnosing Syndrome X, classified in class 435, subclass 4.

XXVIII. Claim 57, drawn to a method of assessing the effectiveness of a treatment for type 2 diabetes in a mammal, classified in class 424, subclass 9.1.

XXIX. Claim 58, drawn to a method of assessing the effectiveness of a treatment for Syndrome X in a mammal, classified in class 424, subclass 9.2.

XXX. Claim 59, drawn to a method of assessing the response in a mammal to TZD, classified in class 424, subclass 9.1.

XXXI. Claim 60, drawn to a method of assessing the response in a mammal to a compound that affects PPARγ-mediated signaling, classified in class 424, subclass 9.1.

XXXII. Claims 61 and 62, drawn to a method of detecting a mutation in a resistin allele in a human, classified in class 435, subclass 6.

XXXIII. Claims 63-66 and 71, drawn to a method of *ex vivo* gene therapy, involving transfection of cells with an antisense nucleic acid, classified in class 424, subclass 93.21.

XXXIV. Claim 67 and 72, drawn to a method of treating a human patient afflicted with type 2 diabetes by transfecting isolated cells with a knockout targeting vector and administering said cells to the patient, classified in class 424, subclass 93.21.

XXXV. Claims 68 and 69, drawn to a method of increasing blood glucose or blood sugar levels in a mammal by administering a resistin polypeptide, classified in class 514, subclass 2.

XXXVI. Claims 70 and 73, drawn to a method of increasing blood sugar level in a mammaly by administering a recombinant cell transfected with a nucleic acid encoding resistin, classified in class 424, subclass 93.21.

Claims 38, 40, and 42 embrace the inventions of Groups XVII and XVIII. Should either of Groups XVII or XVIII be elected, Claims 38, 40, and 42 will be examined only to the extent that they encompass the elected subject matter.

Claims 39, 41, and 43 embrace the inventions of Groups XIX and XX. Should either of Groups XIX or XX be elected, Claims 39, 41, and 43 will be examined only to the extent that they encompass the elected subject matter.

Claim 1 links the inventions of Groups I and II. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 1.

Claim 8 links the inventions of Groups III and IV. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 8.

Claim 12 links the inventions of Groups V and VI. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 12.

Claim 19 links the inventions of Groups VII and VIII. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 19.

Claim 22 links the inventions of Groups IX and X. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 22.

Claim 26 links the inventions of Groups XI and XII. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 26.

Claim 27 links the inventions of Groups XIII and XIV. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 27.

Claim 33 links the inventions of Groups XV and XVI. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim, claim 33.

Upon the allowance of the linking claim, the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The inventions are distinct, each from the other because of the following reasons:

Inventions I-IV represent distinct inventions drawn to different and distinct sequences which do not render obvious each other and thus are patentably distinct. Restriction to examination of a single sequence is due to the now very high and undue burden for examining more than one sequence, which is the consequence of the continued exponential increase in size of the sequence databases to be searched for each sequence, resulting in a corresponding increase in computer search time and examiner time for reviewing the computer search results. Therefore, the limited resources of the Office no longer permit examination of more than one sequence in an application.

Inventions I-XVI, XXII, and XXIII are patentably distinct, one from the other, because the inventions are drawn to distinct compositions. The compositions of the inventions of Groups I-XVI, XXII, and XXIII are structurally, chemically, biologically, and functionally distinct, one from the other. For example, the antisense nucleic acid of the invention of Group VIII is clearly structurally, chemically, biologically, and functionally distinct from the antibody of the invention of Group IX. Thus, the compositions of the inventions of Groups I-XVI, XXII, and XXIII are patentably distinct, each from the other.

Inventions XVII-XXI and XXIV-XXXVI are patentably distinct, one from the other, because the inventions are drawn to independent methods that utilize different reagents, have different method steps, and produce different effects. For example, the method of the invention of Group XVII requires the use of an antibody that specifically binds a mammalian resistin polypeptide, whereas the method of the invention of Group XVIII does not require use of an antibody of this type, but rather requires the administration of an antisense nucleic acids. Thus, the method of each group requires the use of different reagents. Furthermore, methods of treating a patient by administration of antibody requires different method steps and different scientific and clinical considerations from methods of treating a patient by administration of antisense nucleic acid. Thus, the methods of the inventions of GroupsXVII-XXI and XXIV-XXXVI are patentably distinct, each from the other.

Inventions I-XVI, XXII, and XXIII are patentably distinct from the inventions of Groups XVII-XXI and XXIV-XXXVI because the inventions are drawn to materially different compositions and distinct methods. Although the antisense nucleic acid of the invention of Group VII can be used in the method of the invention of Group XVIII, its use is not limited to alleviating type 2 diabetes, as it can also be used *in vitro* to suppress expression of a mouse resistin polypeptide in cells in culture. Furthermore, the method of the invention of Group XVIII can be carried out using other antisense nucleic acids, as it is not limited to the use of a mouse resistin antisense nucleic acid. Thus, the compositions of the inventions of Groups I-XVI, XXII, and XXIII are patentably distinct from the methods of the inventions of Groups XVII-XXI and XXIV-XXXVI.

Because these inventions are distinct and because the searches required for the separate inventions are not coextensive, restriction for examination purposes as indicated is proper. For these reasons, examination of all 36 inventions in a single patent application constitutes an undue burden on the Office.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne-Marie Falk whose telephone number is (571) 272-0728. The examiner can normally be reached Monday through Friday from 10:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (571) 272-0804. The central official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Dianiece Jacobs, whose telephone number is (571) 272-0532.

Anne-Marie Falk, Ph.D.

Anne-Marie Falk

ANNE-MARIE FALK, PH.D
PRIMARY EXAMINER

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set in the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing Error Report."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☒ 7. Other: The Sequence Listing filed October 17, 2003 was not accompanied by the requisite statement as required by 37 CFR 1.821(f).

Applicant Must Provide:

☐ An **substitute** computer readable form (CRF) copy of the "Sequence Listing".

☐ An **substitute** paper copy of the "Sequence Listing", **as well as an amendment directing its entry into the specification.**

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:
For Rules Interpretation, call (703) 308-4216
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